NC/QC/W-06/2019-20/CN-C1

Date: 13-12-2019

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**168 min**	Shall not be less than 30 min
2	Final setting time	**295 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**1.87 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.92 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	**28.31 N/Sq mm**	Shall not be less than 27 N/Sqmm

NEWZEN CONSULTANT BANGALORE

KIRAN. R
M.E, (Civil-Engg)

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/W-06/2019-20/CN-PCC1 **Date: 13-12-2019**

1. TESTING OF COARSE AND FINE AGGREGATES:

Sub: Testing of Coarse and Fine aggregates to be used for bed concrete.
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}

Ref.: Material testing/PMC/19-20,

Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

1. COARSE AGGRGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	Single size	Graded
40mm	**100.00**	85-100	90 – 100
20mm	**62.30**	0 -20	30- 70
10mm	**26.05**	0 -5	10- 35
4.75mm	**3.75**	------	0- 5

2. FINE AGGREGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	**100.00**	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	**98.40**	60-95	75-100	85-100	
01.18	**86.25**	30-70	55-90	75-100	
600.mic	**40.95**	15-34	35-59	60-79	
300.mic	**17.10**	5-20	8-30	12-40	
150.mic	**6.80**	0-10	0-10	0-10	

NEWZEN CONSULTANT * SANGALORE *

KIRAN. R
M.E, (Civil-Engg)

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA, JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/W-06/2019-20/CN-C2 **Date: 17-12-2019**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**169 min**	Shall not be less than 30 min
2	Final setting time	**260 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**1.94 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.88 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results	**29.14 N/Sq mm**	Shall not be less than 27 N/Sqmm

NEWZEN CONSULTANT BANGALORE

Page No. 1/1,

KIRAN. R
M.E, (Civil-Engg)

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP

NC/QC/W-06/2019-20/CN-FA1 **Date: 17-12-2019**

1. TESTING OF FINE AGGREGATES :

Sub: Testing of Fine Aggregates.
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size,mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -II	
04.75	**97.95**	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	**81.30**	60-95	75-100	85-100	
01.18	**75.40**	30-70	55-90	75-100	
600. mic	**48.15**	15.34	35-59	60-79	
300.mic	**23.70**	5-20	8-30	12-40	
150.mic	**8.65**	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	**Requirements** as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Bulking of Sand	001	**18.02 %**	-----
2	Silt Content	----	**0.58 %**	Not more than 8%
3	Specific Gravity	----	**2.61**	-------

NEWZEN CONSULTANT BANGALORE

Page No. 1/1,

KIRAN. T
M.E, (Civil-Engg)

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

NC/QC/W-06/2019-20/CN-CA1

Date: 17-12-2019

1. TESTING OF COARSE AGGREGATES (20 mm):

Sub: Testing of Construction Materials.

{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}

Ref.: Material testing/PMC/19-20,

Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	20 mm Sample	Single size	Graded
40 mm	**100.00**	100.00	100.00
20 mm	**96.95**	85-100	90 - 100
10 mm	**40.70**	0 - 20	25 - 55
4.75 mm	**3.10**	0 - 5	0 - 10

TABLE 1.2 :

SL No	Test conducted	Results	Requirements as per IS:383-1970 & Tests Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	**22.96 %**	Not to exceed 25 %
2.	Crushing value	**28.29%**	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

NEWZEN CONSULTANT BANGALORE

KIRAN. R
M.E, (Civil-Eng

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA, JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/W-06/2019-20/CN-S1

Date: 17-12-2019

1. TEST REPORT ON REINFORCEMENT STEEL:

Sub: Testing of Reinforcement Steel of diameter 10 and 12 mm **TMT Steel.**
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}

Ref.: Material testing/PMC/19-20,

Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

TABLE – 1

SL No	Details	For 10 mm		For 12 mm	
		Test Results	Min Req. as per IS 1786-2008	**Test Results**	Min Req. as per IS 1786-2008
01	Observed diameter of bar	**10.0 mm**	10.0 mm	**8.0 mm**	12.0 mm
02	Observed Wt/m Length **Kg/m**	**0.622**	0.567	**0.894**	0.834
03	Proof stress/Yield stress, fy , **N/mm^2**	**541.0**	500.0	**546.0**	500.0
04	Bend/ Re bend Test	**Ok**	---	**Ok**	---
05	Percentage of Elongation, %	**20.95**	12.00	**20.60**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**636.0**	545.0	**641.0**	545.0

Page No. 1/1,

KIRAN. R
M.E. (Civil-Engg)

NEWZEN CONSULTANT * BANGALORE *

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

NC/QC/W-06/2019-20/CN-CB1

Date: 26-12-2019

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}

Ref.: Material testing/PMC/19-20,

Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	19-12-19	26-12-19	07	22500	390	17.33	**16.96**
	002	"	"	"	"	380	16.89	
	003	"	"	"	"	375	16.67	

KIRAN. R
M.E, (Civil-Engg)

NEWZEN CONSULTANT * BANGALORE *

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/W-06/2019-20/CN-CB2

Date: 28-12-2019

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	21-12-19	28-12-19	07	22500	370	16.44	**17.11**
	002	"	"	"	"	385	17.11	
	003	"	"	"	"	400	17.78	

KIRAN. R
M.E. (Civil-Engg)

NEWZEN CONSULTANT * BANGALORE *

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA, JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/W-06/2019-20/CN-CB3 **Date: 31-12-2019**

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	24-12-19	31-12-19	07	22500	380	16.89	**16.52**
	002	"	"	"	"	360	16.00	
	003	"	"	"	"	375	16.67	

NEWZEN CONSULTANT * BANGALORE *

KIRAN. R
M.E, (Civil-Engg)

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA, JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/W-06/2019-20/CN-CB1a

Date: 16-01-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}

Ref.: Material testing/PMC/19-20,

Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	19-12-19	16-01-20	29	22500	515	22.89	**22.52**
	002	"	"	"	"	500	22.22	
	003	"	"	"	"	505	22.44	

NEWZEN CONSULTANT * BANGALORE *

KIRAN. R
M.E. (Civil-Engg)

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/W-06/2019-20/CN-CB2a

Date: 18-01-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}

Ref.: Material testing/PMC/19-20,

Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	21-12-19	18-01-20	28	22500	510	22.67	**22.30**
	002	"	"	"	"	495	22.00	
	003	"	"	"	"	500	22.22	

KIRAN. R
M.E, (Civil-Engg)

NEWZEN CONSULTANT * BANGALORE *

Page No. 1/1,

Asst. Executive Engineer
Project Division
Yelahanka Zone

NC/QC/W-06/2019-20/CN-CB3a

Date: 21-01-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	24-12-19	21-01-20	28	22500	505	22.44	**22.67**
	002	"	"	"	"	515	22.89	
	003	"	"	"	"	510	22.67	

NEWZEN CONSULTANT * BANGALORE *

KIRAN. R
M.E, (Civil-Engg)

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA, JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/W-06/2019-20/CN -K1

Date: 08-01-2020

TEST REPORT

Sub: Testing of Pre-cast Material-Kerb Stones.
{Project*: Improvements of drains and Construction of RCC Culverts at Chanukya Layout Nagawara Ward No.06.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Project Division, Yelahanka Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri. Nagaraj. T, Bangalore.

1. PHYSICAL TESTS ON KERB STONES :

Sl No.	Identification	Flexural strength, fcr in N/sqmm	Characteristic Compressive Strength, fck in N/sqmm	Avg. Characteristic. Compressive Strength fck in N/sqmm	Remarks
1	001	3.38	23.45	**23.22**	As per Cl. 6.2.2 of IS 456- 2000, fcr=0.7√ fck
2	002	3.35	22.95		
3	003	3.37	23.30		

2. WATER ABSORPTION TEST

Sl No	Identification	Water absorption %	Average value %
1	001	4.38	**4.46**
2	002	4.46	
3	003	4.55	

NEWZEN CONSULTANT * BANGALORE *

KIRAN. R
M.E, (Civil-Engg)

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com